

AMENDMENT(S) TO THE CLAIMS

Please cancel claims 1, 4, 7, 8, 36, 42 and 46 as follows. This listing of claims will replace all prior versions and listings of claims in this application:

Listing of Claims:

1. (Canceled)

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Previously presented) A method for increasing the hardness of silica/rubber mixtures comprising blending with said mixture at least one silane and a hardness-increasing amount of at least one member selected from the group consisting of thixotropic fumed silica, precipitated silica wherein the total amount of silica is from 80 phr to 110 phr, an MQ resin wherein Q is  $\text{SiO}_{4/2}$ , M is  $\text{R}^a\text{R}^b\text{R}^c\text{SiO}_{1/2}$ , and  $\text{R}^a$ ,  $\text{R}^b$ , and  $\text{R}^c$  are the same or different functional or non-functional organic groups, a thermoplastic resin selected from the group consisting of high-

density polyethylene, ultra high molecular weight polyethylene and low density-polyethylene and a thermosetting resin, wherein the silane is 3-octanoylthio-1-propyltriethoxysilane.

7. (Canceled)

8. (Canceled)

9. (Previously presented) The method of claim 6 wherein the at least one member is thixotropic-(hydrophilic and hydrophobic) fumed (pyrogenic) silica.

Claims 10 to 13, (Cancelled).

14. (Cancelled)

15. (Original) The method of claim 9 wherein the silica/rubber mixture further comprises an inorganic filler.

16. (Previously presented) The method of claim 15 wherein the inorganic filler is selected from the group consisting of titanium dioxide, aluminosilicate, alumina, calcium carbonate, carbon fibers, glass fibers, kaolin clay, mica, talc and wollastonite.

17. (Previously presented) The method of claim 6 wherein the member is precipitated silica.

Claims 18 to 21, (Cancelled).

22. (Cancelled)

23. (Original) The method of claim 17 wherein the silica/rubber mixture further comprises an inorganic filler.

24. (Previously presented) The method of claim 23 wherein the inorganic filler is selected from the group consisting of titanium dioxide, aluminosilicate, alumina, calcium carbonate, carbon fibers, glass fibers, kaolin clay, mica, talc and wollastonite.

25. (Previously presented) A method for increasing the hardness of silica/rubber mixtures comprising blending with said mixture at least one silane and a hardness-increasing amount of an MQ resin wherein Q is  $\text{SiO}_{4/2}$ , M is  $\text{R}^a\text{R}^b\text{R}^c\text{SiO}_{1/2}$ , and  $\text{R}^a$ ,  $\text{R}^b$ , and  $\text{R}^c$  are the same or different functional or non-functional organic groups, wherein the silane is a blocked mercaptosilane, and wherein the silica/rubber mixture optionally includes inorganic filler, and wherein said hardness increasing amount is sufficient to achieve a Shore A hardness of the silica/rubber mixture of from 56 to 63 and which is above the amount necessary to achieve

equivalent Shore A hardness of the silica/rubber mixture as compared with the use of an equivalent molar amount of bis-(triethoxysilylpropyldisulfide) as the silane.

Claims 26 to 29, (Cancelled).

30. (Previously presented) A method for increasing the hardness of silica/rubber mixtures comprising blending with said mixture at least one silane and a hardness-increasing amount of an MQ resin wherein Q is  $\text{SiO}_{4/2}$ , M is  $\text{R}^a\text{R}^b\text{R}^c\text{SiO}_{1/2}$ , and  $\text{R}^a$ ,  $\text{R}^b$ , and  $\text{R}^c$  are the same or different functional or non-functional organic groups, wherein the silane is 3-octanoylthio-1-propyltriethoxysilane.

31. (Original) The method of claim 25 wherein the silica/rubber mixture further comprises an inorganic filler.

32. (Previously presented) The method of claim 31 wherein the inorganic filler is selected from the group consisting of titanium dioxide, aluminosilicate, alumina, calcium carbonate, carbon fibers, glass fibers, kaolin clay, mica, talc and wollastonite.

33. (Previously presented) The method of claim 6 further including the step of blending carbon black into the mixture.

34. (Cancelled)

35. (Previously presented) The method of claim 6 wherein the at least one member is the thermoplastic resin.

36. (Canceled)

37. (Cancelled)

38. (Previously presented) The method of claim 6 wherein the at least one member is a thermosetting resin.

Claims 39 to 41 (Canceled)

42. (Canceled)

43. (Previously presented) An article of manufacture comprising a silica/rubber mixture hardened by blending with said mixture at least one silane and a hardness-increasing amount of at least one member selected from the group consisting of thixotropic fumed silica , precipitated silica wherein the total amount of silica is from 80 phr to 110 phr, an MQ resin wherein Q is  $\text{SiO}_{4/2}$ , M is  $\text{R}^a\text{R}^b\text{R}^c\text{SiO}_{1/2}$  , and  $\text{R}^a$ ,  $\text{R}^b$ , and  $\text{R}^c$  are the same or different functional or non-

functional organic groups, a thermoplastic resin selected from the group consisting of high-density polyethylene, ultra high molecular weight polyethylene, low density-polyethylene and a thermosetting resin, wherein the silane is 3-octanoylthio-1-propyltriethoxysilane.

44. (Previously presented) An article of manufacture comprising a silica/rubber mixture hardened by blending with said mixture at least one silane and a hardness-increasing amount of an MQ resin wherein Q is  $\text{SiO}_{4/2}$ , M is  $\text{R}^a\text{R}^b\text{R}^c\text{SiO}_{1/2}$ , and  $\text{R}^a$ ,  $\text{R}^b$ , and  $\text{R}^c$  are the same or different functional or non-functional organic groups, wherein the silane is 3-octanoylthio-1-propyltriethoxysilane, and wherein the silica/rubber mixture optionally includes inorganic filler, and wherein said hardness increasing amount is sufficient to achieve a Shore A hardness of the silica/rubber mixture of from 56 to 63 and which is above the amount necessary to achieve equivalent Shore A hardness of the silica/rubber mixture as compared with the use of an equivalent molar amount of bis-(triethoxysilylpropyl disulfide) as the silane.

45. (Previously presented) The article of claim 44 wherein said article is a tread portion of a tire.

46. (Canceled)

47. (Previously presented) A method for increasing the hardness of silica/rubber mixtures comprising blending with said mixture at least one silane coupling agent and a hardness-

increasing amount of silica wherein the total amount of silica is from 80 phr to 110 phr, wherein the silane coupling agent is 3-octanoylthio-1-propyltriethoxysilane,

and wherein said hardness increasing amount is sufficient to achieve a Shore A hardness of from 56 to 63 and which is above the amount necessary to achieve equivalent Shore A hardness of the silica/rubber mixture as compared with the use of an equivalent molar amount of bis-(triethoxysilylpropyldisulfide) as the silane.

48. (Previously presented) An article of manufacture comprising a silica/rubber mixture hardened by blending with said mixture at least one silane coupling agent and a hardness-increasing amount of silica wherein the total amount of silica is from 80 phr to 110 phr, wherein the silane coupling agent is 3-octanoylthio-1-propyltriethoxysilane, and wherein the silica/rubber mixture optionally includes inorganic filler,

and wherein said hardness increasing amount is sufficient to achieve a Shore A hardness of from 56 to 63 and which is above the amount necessary to achieve equivalent Shore A hardness of the silica/rubber mixture as compared with the use of an equivalent molar amount of bis-(triethoxysilylpropyldisulfide) as the silane.

49. (Previously presented) The method of claim 25 wherein the silica/rubber mixture comprises a rubber selected from the group consisting of solution styrene-butadiene rubber (SSBR), styrene-butadiene rubber (SBR), natural rubber (NR), polybutadiene (BR), ethylene-propylene co- and terpolymers (EP, EPDM), and acrylonitrile-butadiene rubber (NBR), isoprene

rubber, 1,3-butadiene, styrene and methyl styrene, natural or synthetic cis-1,4-polyisoprene  
rubber, emulsion polymerization prepared styrene/butadiene copolymer rubber, organic solution  
polymerization prepared styrene/butadiene rubber, 3,4-polyisoprene rubber, isoprene/butadiene  
rubber, styrene/isoprene/butadiene terpolymer rubber, cis-1,4-polybutadiene, vinyl polybutadiene  
rubber styrene/isoprene copolymers, emulsion polymerization prepared  
styrene/butadiene/acrylonitrile terpolymer rubber and butadiene/acrylonitrile copolymer rubber.